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EXAMINER

ADAMS, GREGORY W

ART UNIT	PAPER NUMBER
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3652

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/693,296

Applicant(s)

ASTEGNO ET AL.

Examiner

Gregory W. Adams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

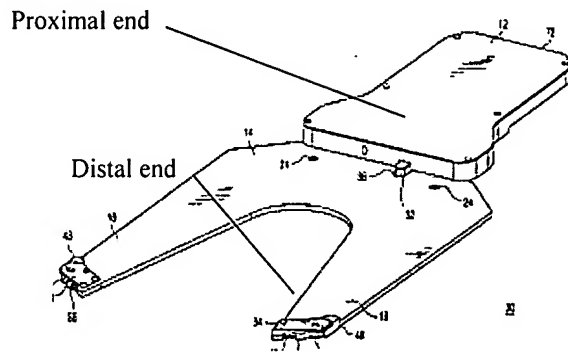
1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-17 & 20-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al. (US 6,116,848) in view of Bacchi et al. (US 6,275,748). Thomas et al. '848 disclose claims 1-9 as recited above.

3. With respect to claim 1, referring to FIGS. 1-5 Thomas et al. '848 disclose an apparatus for accessing and gripping disc-shaped wafers 10, 30 including a rigid support structure 14, dimensioned to fit between adjacent wafers without physically engaging adjacent wafers, wafer supports 20, 32, 34, 36, 48, and a rotatable driver 50. Thomas et al. '848 do not disclose a wafer having a peripheral position indicator. Referring to FIGS. 1-13, Baachi et al. '748 disclose a wafer 12 having a periphery position indicator 18, 30 for sensing by detectors 80. Col. 2, Ins. 55-67. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Thomas et al. '848 to include a periphery position indicator, as per the teachings of Bacchi et al., such that detectors may sense the periphery of the wafer.

4. With respect to claim 2, referring to FIGS. 1-5 Thomas et al. '848 disclose a proximal end and a distal end. [Shown below.]



5. With respect to claim 3, referring to FIGS. 1-5 Thomas et al. disclose wafer supports on distal end and proximal end.
6. With respect to claim 4, referring to FIGS. 1-5 Thomas et al. disclose a rotatable driver 40, 50.
7. With respect to claim 5, referring to FIGS. 1-5 Thomas et al. disclose a rigid frame 14, a pair of elongated arms 18, 18 having a proximal end and a distal end, and connected by proximal support bar 72, and distal support bar 34, 44. It is noted that Thomas et al. do not presuppose interconnecting the elongated arms 18, 18.
8. With respect to claim 6, referring to FIGS. 1-5 Thomas et al. disclose a pair of parallel elongated arms 18, 18.
9. With respect to claim 7, referring to FIGS. 1-5 Thomas et al. disclose two wafer supports 24, 24, 48, 48 on the distal support bar 34, 44 and one wafer support 24, 24, 32, 36 on the proximal support bar 72.
10. With respect to claim 8, referring to FIGS. 1-5 Thomas et al. disclose wafer supports 20, 32, 34, 36, 48, to support the periphery of a wafer 10, 30 mounted in a plane perpendicular to the plane of a wafer.

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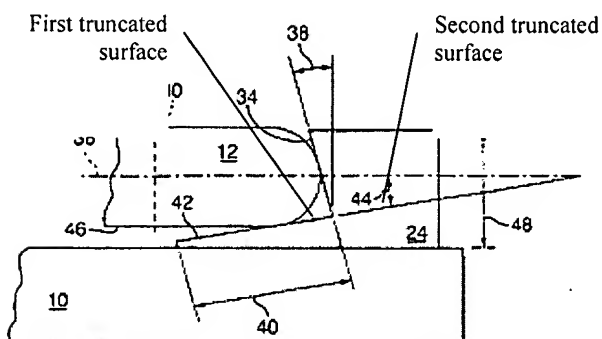
11. With respect to claim 9, referring to FIGS. 1-5 Thomas et al. disclose wafer supports 20, 32, 34, 36, 48 adapted to engage a wafer 10, 30.

12. With respect to claim 10, Thomas et al. do not disclose a first truncated surface. Baachi et al. '747 discloses a truncated surface. Referring to FIGS. 3-4 Bacchi et al. discloses a first truncated surface 24, 44, 48 (shown below) which assist in centering and gripping the wafer between the active contact point and the distal rest pads. Col. 2, Ins. 48-58. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to angle the first truncated surface of a wafer support of Thomas et al., as per the teachings of Bacchi et al., to assist in centering and gripping the wafer between the active contact point and the distal rest pads. Further, Thomas et al. and Bacchi et al. disclose the claimed invention except for an angle between 5 and 45 degrees. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an angle between 5 and 45 degrees, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

13. With respect to claim 11, Thomas et al. do not disclose a first truncated surface angled. Referring to FIGS. 3-4 Baachi et al. discloses an angled first truncated surface 24, 44, 48 (shown below) which assist in centering and gripping the wafer between the active contact point and the distal rest pads. Col. 2, Ins. 48-58. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to angle the first truncated surface of a wafer support of Thomas et al., as per the teachings of Bacchi et al., to assist in centering and gripping the wafer between the

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active contact point and the distal rest pads. Further, Thomas et al. and Bacchi et al. disclose the claimed invention except for an angle between 5 and 45 degrees. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an angle between 5 and 45 degrees., since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).



14. With respect to claim 12, Thomas et al. do not disclose a second truncated surface angled. Referring to FIGS. 3-4 Baachi et al. discloses a second truncated surface 24, 44, 48 (shown above) which assist in centering and gripping the wafer between the active contact point and the distal rest pads. Col. 2, Ins. 48-58. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to angle the first truncated surface of a wafer support of Thomas et al., as per the teachings of Bacchi et al., to assist in centering and gripping the wafer between the active contact point and the distal rest pads.

15. With respect to claim 13, referring to FIGS. 1-5 Thomas et al. disclose a rotatable driver 40, 50, rollers 24 having a friction surface, col. 4, Ins. 57-63, and a motor 52.

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16. With respect to claim 14, Thomas et al. disclose the claimed invention except for a friction drive surface comprised of soft rubber material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a friction drive surface comprised of soft rubber material, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

17. With respect to claim 15, referring to FIGS. 1-5 Thomas et al. disclose a wafer support 48 comprising a rotatable driver 40, 50.

18. With respect to claim 16, Thomas et al. do not disclose a first optical detector. Referring to FIGS. 1-13, Bacchi et al. disclose a first optical detector 80 mounted on a rigid support structure to detect a wafer radial position. Col. 2, Ins. 55-67. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a first optical detector to the apparatus of Thomas et al., as per the teachings of Bacchi et al., to detect the periphery position indicator and establish the wafer orientation.

19. With respect to claim 17, Thomas et al. do not disclose a first optical detector, emitter, and receiver. Baachi et al. disclose a first optical detector 80 having an emitter 84, receiver 86, for detecting the peripheral position indicator 18, 30 for wafer location purposes. Col. 2, Ins. 55-67. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a first optical detector, emitter, and receiver, to the apparatus of Thomas et al., as per the teachings of Bacchi et al.,

such that the peripheral position indicator is detected and subsequently the location of the wafer is established.

20. With respect to claim 20, referring to FIGS. 1-5 Thomas et al. disclose stopping the rotatable driver 40, 50 when wafer is in a radial position. Col. 2, Ins. 18-25.

21. With respect to claim 21, Thomas et al. do not disclose mounting a wafer guide on a rigid support. Referring to FIGS. 1-13, Bacchi et al. disclose a wafer guide 82, 150, 151 mounted to a rigid support to sense a wafer periphery and/or position the wafer. Col. 7, Ins. 10-25; col. 9, Ins. 25-30. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a wafer guide to the apparatus of Thomas et al., as per the teachings of Bacchi et al., to sense a wafer periphery and/or position the wafer.

22. With respect to claim 22, Thomas et al. do not disclose a wafer guide to detect wafer position relative to a rigid support. Referring to FIGS. 1-13, Bacchi et al. disclose a wafer guide 82, 150, 151 to detect a wafer position relative to a rigid support for alignment of the wafer for transport by an apparatus 10. Col. 7, Ins. 10-25; col. 9, Ins. 25-30. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a wafer guide to the apparatus of Thomas et al., as per the teachings of Bacchi et al., to sense a wafer periphery and/or position the wafer relative to a rigid support.

23. With respect to claim 23, Thomas et al. do not disclose a wafer guide which detects a wafer relative to X and Y directions. Referring to FIGS. 1-13, Bacchi et al. disclose a wafer guide 82, 150, 151 to detect a wafer position relative to a rigid support

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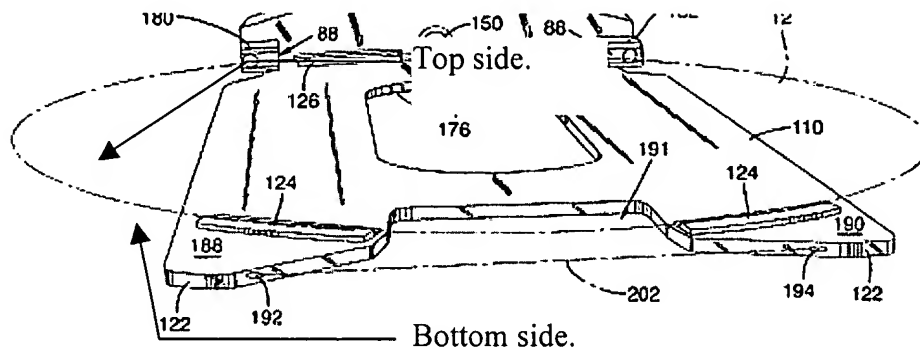
in an X-Y direction for transport by an apparatus 10. Col. 7, Ins. 10-25; col. 9, Ins. 25-30.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a wafer guide that positions a wafer in an X and Y direction to the apparatus of Thomas et al., as per the teachings of Bacchi et al., to sense a wafer periphery and subsequently position a wafer for transfer by an apparatus.

24. With respect to claim 24, Thomas et al. do not disclose a second optical detector.

Baachi et al. disclose a second optical detector 82, to sense a wafer periphery and/or position the wafer. Col. 7, Ins. 10-25; col. 9, Ins. 25-30. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a wafer guide comprising a second optical detector to the apparatus of Thomas et al., as per the teachings of Bacchi et al., to sense a wafer periphery and/or position the wafer.

25. With respect to claim 25, Thomas et al. do not disclose an optical detector emitter and receiver. Baachi et al. disclose a second optical detector 80 having an emitter 84 and receiver 86 for detecting the peripheral position indicator 18, 30 for wafer location purposes. Col. 7, Ins. 10-25; col. 2, Ins. 55-67. It is noted that Baachi et al. disclose sides of a wafer as the flat or broad sides as shown below. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a first optical detector, emitter, and receiver, to the apparatus of Thomas et al., as per the teachings of Bacchi et al., such that the peripheral position indicator is detected and subsequently the location of the wafer is established.



26. With respect to claim 26, Thomas et al. do not disclose mounting an emitter and receiver on a rigid support, on opposite sides of said rigid support. Referring to FIGS. 1-13, Bacchi et al. disclose a mounting an emitter 84 and receiver 86 on opposite sides of a rigid support such that the optical detector can inform a wafers position and elevation, for subsequent wafer positioning and transfer. Col. 7, Ins. 10-25; col. 9, Ins. 25-30. As noted in the claim 25 rejection, Bacchi et al. discloses as those flat or broad sides of a wafer. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a wafer guide that positions a wafer in an X and Y direction to the apparatus of Thomas et al., as per the teachings of Bacchi et al., to sense a wafer periphery and subsequently position a wafer for transfer by an apparatus.

27. With respect to claim 27, Thomas et al. do not disclose a third optical detector. Referring to FIGS. 1-13, Bacchi et al. disclose a third optical detector 100 for sensing a wafer elevation. Col. 7, Ins. 27-40. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a third optical detector to the apparatus of Thomas et al., as per the teachings of Bacchi et al., to sense wafer elevation.

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28. With respect to claim 28, Thomas et al. do not disclose a third optical detector having an emitter and receiver. Referring to FIGS. 1-13, Bacchi et al. disclose a third optical detector 100 having an emitter 102 and receiver 104 for detecting the elevation of a wafer. Col. 7, Ins. 27-40. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a third optical detector to the apparatus of Thomas et al., as per the teachings of Bacchi et al., to detect wafer elevation.

29. With respect to claim 29, Thomas et al. do not disclose a third optical detector receiver mounted to a rigid support. Referring to FIGS. 1-13, Bacchi et al. disclose a third optical detector receiver 104 mounted to a rigid support opposite a third emitter 102 such that the elevation of the wafer is detected. Col. 7, Ins. 27-40. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a third optical detector to the apparatus of Thomas et al., as per the teachings of Bacchi et al., to detect a wafers elevation.

30. With respect to claim 30, Thomas et al. disclose wafer supports 20, 32, 34, 36, 48 which are a pair of rollers placed around a periphery of a wafer.

31. With respect to claim 31, referring to FIGS. 1-5 Thomas et al. '848 disclose an apparatus for accessing and gripping disc-shaped wafers 10, 30 including a plurality of rigid support structures 12, 14, 18, 72, dimensioned to fit between adjacent wafers without physically engaging adjacent wafers, fixed, rotatable wafer supports 20, 32, 34, 36, 48, and a rotatable driver 50. Thomas et al. '848 do not disclose a wafer having a peripheral position indicator. Referring to FIGS. 1-13, Baachi et al. '748 disclose a wafer

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12 having a periphery position indicator 18, 30 for sensing by detectors 80. Col. 2, Ins. 55-67. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Thomas et al. '848 to include a periphery position indicator, as per the teachings of Bacchi et al., such that detectors may sense the periphery of the wafer.

32. With respect to claim 32, referring to FIGS. 1-5 Thomas et al. '848 disclose attaching the rigid support proximal end to a displacement means, and a distal end.

33. With respect to claim 33, referring to FIGS. 1-5 Thomas et al. '848 disclose a frame 12, 14, 18, 72, pair of elongated arms 18, 18, proximal support bar 72, and distal support bar 34, 44.

34. With respect to claim 34, referring to FIGS. 1-5 Thomas et al. '848 disclose rotatable wafer supports 20, 32, 34, 36, 48, are mounted at periphery of wafer 10, 30.

35. With respect to claim 35, referring to FIGS. 1-5 Thomas et al. '848 disclose rotatable wafer supports 20, 32, 34, 36, 48, to contact a wafer 10, 30 periphery.

36. With respect to claim 36, referring to FIGS. 1-5 Thomas et al. disclose a rotatable driver 40, 50, rollers 24 having a friction surface, col. 4, Ins. 57-63, motor 52.

37. With respect to claim 37, referring to FIGS. 1-5 Thomas et al. disclose a wafer support 48 comprises a rotatable driver 40.

38. With respect to claim 38, Thomas et al. do not disclose a first optical detector. Baachi et al. disclose a first optical detector 80 mounted on a rigid support structure to detect a wafer radial position. Col. 2, Ins. 55-67. It is noted that radial position may define any position on a wafer or a position of a wafer in relation to other structure or

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features. See The American Heritage® Dictionary of the English Language, Fourth Edition, defining radial as “a position radiating from or converging to a common center”. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a first optical detector to the apparatus of Thomas et al., as per the teachings of Bacchi et al., to detect the periphery position indicator and establish the wafer orientation.

39. With respect to claim 39, Thomas et al. do not disclose mounting a wafer guide on a rigid support for detecting a wafer position relative to a rigid support. Referring to FIGS. 1-13, Bacchi et al. disclose a wafer guide 82, 150, 151 mounted to a rigid support to sense a wafer periphery and/or position the wafer. Col. 7, Ins. 10-25; col. 9, Ins. 25-30. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a wafer guide to the apparatus of Thomas et al., as per the teachings of Bacchi et al., to sense a wafer periphery and/or position the wafer.

40. With respect to claim 40, Thomas et al. do not disclose mounting a wafer guide on a rigid support for detecting a wafer position relative to a rigid support while in parallel planes. Referring to FIGS. 1-13, Bacchi et al. disclose a wafer guide 82, 150, 151 mounted to a rigid support to sense a wafer periphery and/or position the wafer while in parallel planes. Col. 7, Ins. 10-25; col. 9, Ins. 25-30. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a wafer guide to the apparatus of Thomas et al., as per the teachings of Bacchi et al., to sense a wafer periphery and/or position the wafer while in parallel planes.

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41. With respect to claim 41, Thomas et al. do not disclose a wafer guide which detects a wafer relative to X and Y directions. Referring to FIGS. 1-13, Bacchi et al. disclose a wafer guide 82, 150, 151 to detect a wafer position relative to a rigid support in an X-Y direction for transport by an apparatus 10. Col. 7, Ins. 10-25; col. 9, Ins. 25-30. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a wafer guide that positions a wafer in an X and Y direction to the apparatus of Thomas et al., as per the teachings of Bacchi et al., to sense a wafer periphery and subsequently position a wafer for transfer by an apparatus.

42. With respect to claim 42, Thomas et al. do not disclose a wafer guide comprising a second optical detector. Baachi et al. disclose a wafer guide 80, 82, 100, 150, 151, comprising a second optical detector 82, to sense a wafer periphery and/or position the wafer. Col. 7, Ins. 10-25; col. 9, Ins. 25-30. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a wafer guide comprising a second optical detector to the apparatus of Thomas et al., as per the teachings of Bacchi et al., to sense a wafer periphery and/or position the wafer.

43. With respect to claim 27, Thomas et al. do not disclose a wafer guide comprising a third optical detector. Referring to FIGS. 1-13, Bacchi et al. disclose a wafer guide 80, 82, 100, 150, 151 comprising a third optical detector 100 for sensing a wafer elevation. Col. 7, Ins. 27-40. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a third optical detector to the apparatus of Thomas et al., as per the teachings of Bacchi et al., to sense wafer elevation.

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44. Claims 18, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al. (US 6,116,848) in view of Bacchi et al. (US 6,275,748) and further in view of Kikuchi et al. (US 5,970,818). Thomas et al. and Bacchi et al. disclose claims 1, 16, & 17 as recited above.

45. With respect to claim 18, Thomas et al. and Bacchi et al. do not disclose a periphery position indicator which is an opening. Kikuchi et al. '818 disclose a periphery position indicator which is an opening for sensing by first optical detector 12a and second optical detector 12b. Col. 4, Ins. 50-57. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add an opening of a wafer to the apparatus of Thomas et al. and Bacchi et al., as per the teachings of Kikuchi et al., for sensing by the first and second optical detectors.

46. With respect to claim 19, Thomas et al. does not disclose a first optical emitter, and receiver. Referring to FIGS. 1-13 Bacchi et al. '748 disclose a first optical emitter 84, and first optical receiver 86, for sensing the peripheral position indicator 18, 30, mounted on a rigid support in order that the periphery position indicator is detected and the wafer orientation established. Col. 7, Ins. 10-25; col. 2, Ins. 55-67. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to mount the first optical emitter and receiver on the rigid support to detect the periphery position indicator and establish the wafer orientation.

Response to Arguments

1. Applicant's arguments filed April 27, 2005 have been fully considered but they are not persuasive.

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2. With respect to claims 1 and 31 Applicant argues that the cited prior art does not disclose a rotatable driver. As noted above under 103 rejections, and with respect to col. 4, lines 13-55, the rotatable driver 50 as well as rotatable driver 40 (see claim 4 above) engage a wafer. To engage is "to cause to interlock" which the cited prior art teaches. The fact that the drivers do not touch rotate a wafer placed upon wafer supports is a distinction that Applicant has not claimed. However, it is noted that rotatable drivers comprise shafts that rotate or actuators which driver rollers into contact. Broadly construed a rotatable driver comprises among others a driver that rotates into position to contact a wafer or a driver that imparts rotational force to rotate a wafer.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory W. Adams whose telephone number is (571) 272-8101. The examiner can normally be reached on M-Th, 8:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on (571) 272-6928. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GWA



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